Purpose and Need
Sycamore and Pigeon Canyon Wildlife Catchment Replacement Project
Tonto National Forest, Payson Ranger District

Date: 04/14/2020
ID Team Leader: Wildlife Program (North Zone), Christina M. Akins
Prepared By: Zoned District Biologist, Christina M. Akins
Project Name: Game and Fish Wildlife Drinker Repair
Project type: Improvement Maintenance
Target Implementation: 2021
Expected NEPA Documentation Type: CE
If Categorical Exclusion, select Category: 32.2 (6) Timber stand or wildlife habitat improvement

Background

The Arizona Game and Fish Department (AGFD) in conjunction with the Forest Service are planning to replace four existing wildlife catchments that have either surpassed their usable lifespan or do not hold enough storage capacity to provide year-round water for wildlife needs.

In the 1950s, the Arizona Game & Fish Department (AGFD) built wildlife water catchments throughout Arizona and several are in need of replacement. The catchments consist of approximately 1000 gallon underground concrete water storage vault with an attached concrete in ground - walk in wildlife drinker. The water storage and drinker are fed by a large concrete collection apron connected to the vault at ground level. Each catchment arrangement lies with a livestock exclosure fence approximately 150-foot by 150-foot (0.5 acre).

Ongoing repairs have been made over the years to keep the catchments functional. These repairs have included cleaning out built-up sediment and patching cracked concrete on the aprons. In recent years the AGFD has worked to completely replace the outdated 1950s catchments with a modern system that allows for more water storage and less maintenance.

Project location

The Sycamore and Pigeon Canyon Wildlife Catchment Replacement Project spans the Payson Ranger District of the Tonto National Forest. Three of the wildlife catchments are located on the Gisela Allotment south of the Town of Payson, Arizona and one wildlife catchment is located on the Pine Allotment, north of the Town of Payson Arizona. The legal location of the project is T8N, R12E, Sec. 6; T8N, R11E, Sec. 1 and T11.5N, R9E, Sec. 27 of the Gila and Salt River Base Meridian.

Existing Condition

The catchments are currently functional, however, during the summer months water has to be hauled to cathcments due to their limited water storage capacity. The catchments also require frequent cleaning and repair to keep them functioning properly.

Catchment Name	Catchment Number	Coordinates	
Tonto Basin #1 drinker	511	-111.1732	34.0718
Tonto Basin #2 drinker	512	-111.1732	34.0628
Tonto Basin #3 drinker	513	-111.1822	34.0601
Tonto Basin #4 drinker	562	-111.4165	34.3529

Desired Conditions

The 1985 Tonto NF Land and Resource Management Plan (LRMP) promotes the implementation of projects which target species diversity and greater wildlife populations through improvement of habitat. Water developments, such as wildlife water catchments, represent an important resource for supporting species populations. This project is intended to provide reliable water for game and nongame species occupying the area. These catchments would enable game and nongame species to occupy the mesas during the summer and avoid dependence on springs within confined canyons, where the potential for predation is higher.

Purpose and Need

Many areas across the Payson Ranger District lack reliable water sources. The purpose and need for this project is to replace needed infrastructure that is past its usable lifespan in order to provide year-round reliable water for wildlife. The locations for the replacement activities are those that the Arizona Game and Fish Department has determined to be critical watering points for wildlife in Game Management Unit 22.

Proposed Action

In partnership with the Tonto National Forest, the AGFD proposed to replace four wildlife catchments on the Payson Ranger District. A typical water catchment design is illustrated in Figure 1 and described under design features. While the overall footprint of each catchment will be consistent with Figure 1, dimensions of individual components may vary slightly from the schematic. The project would include the construction of catchment basins and the installation of storage tanks and troughs to provide supplemental water sources to wildlife at four discrete locations. Activities associated with construction of each catchment would occur within an approximate 150-foot by 150-foot area (0.5 acre) that is within the existing disturbed footprint from the existing trick tanks. The tanks would be completely buried unless precluded by soil conditions, the presence of large boulders or bedrock, in which case the tanks may be partially buried or placed above ground. Each catchment would be enclosed with a steel pipe-rail fence that would exclude livestock.

Design Features

The project would include the removal of the old Forest Service Catchments and the construction of new catchments with the installation of tanks and troughs to provide supplemental water sources to wildlife. Activities associated with the construction of the new catchments would occur within an approximately 150-foot by 150-foot area (0.5 acre), the same locations as the existing catchments. Construction of the catchments would involve the excavation of a 52-foot-long by 18-foot-wide by 5-foot-deep area with a backhoe. The excavated areas would be lined with rubber mats, and six 2,500-gallon polyethylene storage tanks would be placed inside. Each tank would be 13-foot-long by 8-foot-wide by 4-foot-deep. The tanks would be completely buried unless precluded by soil conditions, the presence of large boulders, or bedrock, in which case the tanks may be partially buried or placed above ground. A 72-foot-long by 24- foot-wide metal apron would be installed to channel precipitation to the storage tanks. A walk-in, wildlife-accessible drinking trough would be placed 40 to 60 feet away and connected to the tanks by a pipe.

The catchments would be enclosed with a black steel pipe-rail fence with vertical supports and three cross rails. Each vertical post would have a concrete footing and the post would be set to a depth of 18 inches below ground surface. The pipe-rail fences would be assembled by hand and with a skid steer tractor within a 20-foot area surrounding the 0.5-acre footprint of disturbance. The pipe-rail fence is designed to allow safe access by wildlife, but restrict access by livestock. The spacing of the rails allow most wildlife the ability to walk through the fence and the height is low enough to allow larger wildlife the ability to jump the fence, but discourages livestock, wild burros and horses from entering. All proposed catchments would be built to the construction standards similar as those required by the Forest service in FSH 2209.22(R3) as well as those for Arizona Game and Fish that are defined by the AZGFD's Wildlife Water Development Standards and are anticipated to have an expected life of approximately 35 years. Future maintenance activities at the new catchments will be the responsibility of AZGFD and would include the removal of debris or vegetation within and adjacent to the catchments, as well as inspections to ensure adequate water levels and to assess wear and damage of all aboveground facilities and fences. Access for maintenance activities would be accomplished through the use of Tonto National Forest roads.

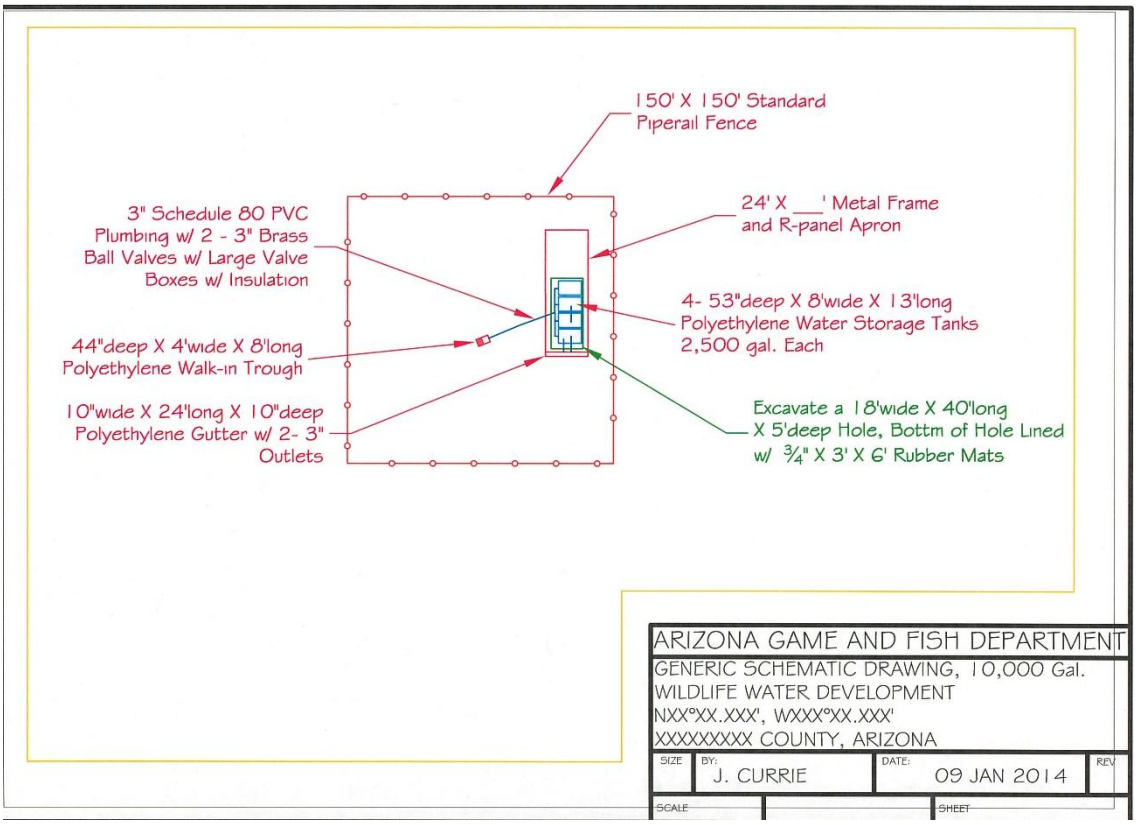

Figure 1 Wildlife Catchment Schematic

Contact

Please provide your questions, concerns, or mitigations electronically,only, to:

Christina M Akins
Zoned District Wildlife Biologist

Forest Service
Payson and Pleasant Valley Ranger Districts, Tonto National Forest

p: 928-474-7918
c: 928-951-3737
f: 928-474-7999
christina.akins@usda.gov

1009 Highway 260
Payson, AZ 85541
www.fs.fed.us

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